

Cloud Computing part-3 projects

Name: BO Iontum

project1

1.1- Attaching a screenshot of my Ec2 dashboard with the running instance

The screenshot displays the AWS Management Console interface. On the left, the navigation menu is visible with categories like 'Instances', 'Images', 'Elastic Block Store', 'Network & Security', and 'Capacity Reservations'. The main content area shows a list of instances at the top, with a filter for 'Instance state = running'. Below the list, the details for a specific instance, 'i-0ab357723bd075cf4 (Our-first-ec2-instance)', are shown. The instance is in a 'Running' state and is a 't2.micro' type. Key details include its Public IPv4 address (44.205.13.115), Private IPv4 address (10.0.1.47), and Public IPv4 DNS (ec2-44-205-13-115.compute-1.amazonaws.com). Other details like VPC ID, Subnet ID, and IAM Role are also visible.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availabi...	Public I...	Public I...
Our-first-e...	i-0ab35772...	Running	t2.micro	2/2 checks pa	View alarms	us-east-1a	ec2-44-20...	44.205.13...

Instance: i-0ab357723bd075cf4 (Our-first-ec2-instance)

Property	Value
Instance ID	i-0ab357723bd075cf4 (Our-first-ec2-instance)
Public IPv4 address	44.205.13.115 open address
Private IPv4 addresses	10.0.1.47
Instance state	Running
Public IPv4 DNS	ec2-44-205-13-115.compute-1.amazonaws.com open address
IPV6 address	-
Instance type	t2.micro
Private IP DNS name (IPv4 only)	ip-10-0-1-47.ec2.internal
Answer private resource DNS name	-
VPC ID	vpc-0b5f16ff3b6ae285e (awesome-vpc-vpc) open address
Subnet ID	subnet-06d0a11a89d4af3da (awesome-vpc-subnet-public1-us-east-1a) open address
Auto-assigned IP address	44.205.13.115 [Public IP]
IAM Role	-
Elastic IP addresses	-
AWS Compute Optimizer finding	Opt-in to AWS Compute Optimizer for recommendations. Learn more
Auto Scaling Group name	-

1.2. Attaching a screenshot of my Security Group displaying all the rules.

The screenshot shows the AWS Management Console with the 'Network & Security' section selected. A list of security groups is displayed, with 'web-sg' (sg-0c95342530d01c17e) selected. The details for this security group are shown, including its name 'my-instance-sg' and VPC ID 'vpc-0f54fdf31485b21bd'. The 'Inbound rules' tab is active, showing a list of rules. The rules table has columns for Name, Security group, IP version, Type, Protocol, Port range, Source, and Description. Two rules are listed: one for SSH (port 22) and one for HTTP (port 80).

Name	Security group ID	Security group name	VPC ID
bo-sg	sg-02ee03a09e44302ba	Bo-Web-Only-SG	vpc-09171408b4c738387
web-sg	sg-0c95342530d01c17e	my-instance-sg	vpc-0f54fdf31485b21bd

sg-0c95342530d01c17e - my-instance-sg

Details | **Inbound rules** | Outbound rules | Tags

Inbound rules (2)

Name	Security group r...	IP versi...	Type	Protocol	Port ra...	Source	Description
-	sgr-07737bfe6fcae...	IPv4	SSH	TCP	22	73.197.34.148/32	ssh to my ec
-	sgr-0b706ecea0b7...	IPv4	HTTP	TCP	80	0.0.0.0/0	allow access

project-2

2.1 – Screenshot for output of output of hostnamectl command

```
users-MacBook-Pro:~ user$ ls
Applications      Library           awesome-key-east1.pem
Bo-Ec2-key.pem   Movies            bo-key-peer1.pem
Desktop           Music             bona.pem
Documents         Pictures          my-ec2key.pem
Downloads         Public

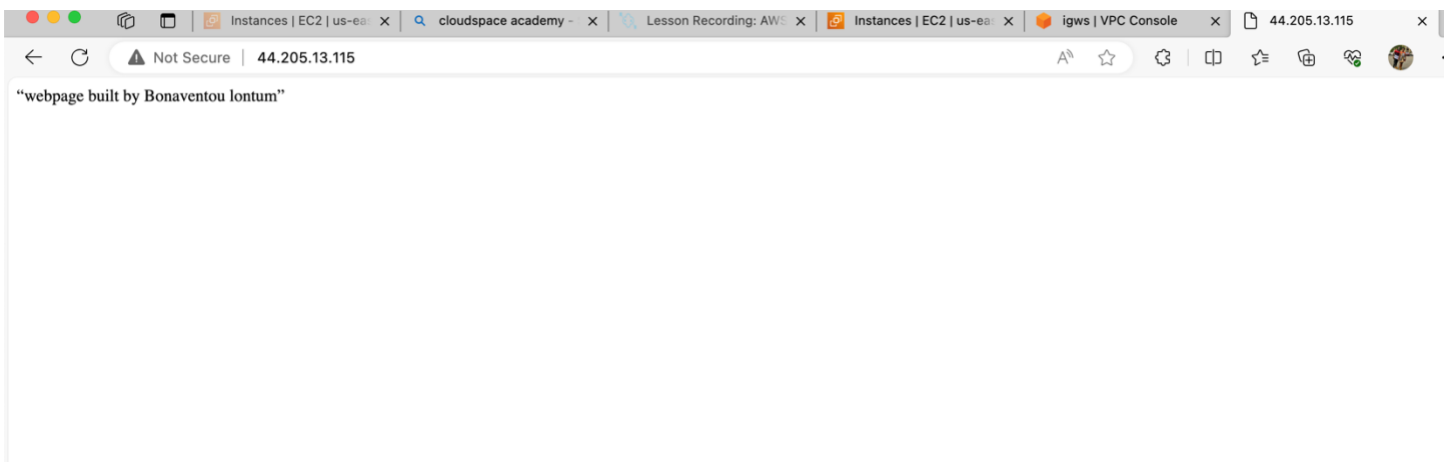
users-MacBook-Pro:~ user$ chmod 400 "awesome-key-east1.pem"
users-MacBook-Pro:~ user$ ssh -i "awesome-key-east1.pem" ec2-user@ec2-44-205-13-115.compute-1.amazonaws.com
The authenticity of host 'ec2-44-205-13-115.compute-1.amazonaws.com (44.205.13.115)' can't be established.
ED25519 key fingerprint is SHA256:Xxs8mmA5Xu4j/Yp7RySyVm9vu7yU2l/xxUBHxLhWnuk.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-44-205-13-115.compute-1.amazonaws.com' (ED25519) to the list of known hosts.

#_
~\_ #####          Amazon Linux 2023
~\_ #####\
~\_ \###|
~\_ \#/
~\_ V~' '->
~\_ .-
~\_ /-
~\_ /m/'

[ec2-user@ip-10-0-1-47 ~]$ hostnamectl
Static hostname: ip-10-0-1-47.ec2.internal
Icon name: computer-vm
Chassis: vm
Machine ID: 336ed4cd87044bed806357d50de9a257
Boot ID: 967f323b30c74799bdf41ef8608761a0
Virtualization: xen
Operating System: Amazon Linux 2023
CPE OS Name: cpe:2.3:o:amazon:amazon_linux:2023
Kernel: Linux 6.1.77-99.164.amzn2023.x86_64
Architecture: x86-64
Hardware Vendor: Xen
Hardware Model: HVM domU
Firmware Version: 4.11.amazon
[ec2-user@ip-10-0-1-47 ~]$
```

project 3

1.2 Display the Webpage built by student name Bonaventou



project 4:

4.1- Launching an EC2 instance using the AMI created in the previous step.

EC2 Dashboard

EC2 Global View

Events

Console-to-Code Preview

▼ Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations New

▼ Images

AMIs

AMI Catalog

► Elastic Block Store

▼ Network & Security

Security Groups

Amazon Machine Images (AMIs) (1/1) Info

↻

Recycle Bin

EC2 Image Builder

Actions ▼

Launch instance from AMI

Owned by me ▼

< 1 >

⚙

<input checked="" type="checkbox"/>	Name ↗	AMI name	AMI ID	Source
<input checked="" type="checkbox"/>	homework4-apache-ami	Our-first-Ec2-Image	ami-074bca379639759a3	975049985507/Our-first-Ec2-Image

AMI ID: ami-074bca379639759a3 (homework4-apache-ami)

Details

Permissions

Storage

Tags

AMI ID	ami-074bca379639759a3 (homework4-apache-ami)	Image type	machine	Platform details	Linux/UNIX	Root device type	EBS
AMI name	Our-first-Ec2-Image	Owner account ID	975049985507	Architecture	x86_64	Usage operation	RunInstances
Root device name	/dev/xvda	Status	Available	Source	975049985507/Our-first-Ec2-Image	Virtualization type	hvm
Boot mode	uefi-preferred	State reason	–	Creation date	Mon Feb 26 2024 14:40:37 GMT-0500 (Eastern Standard Time)	Kernel ID	–

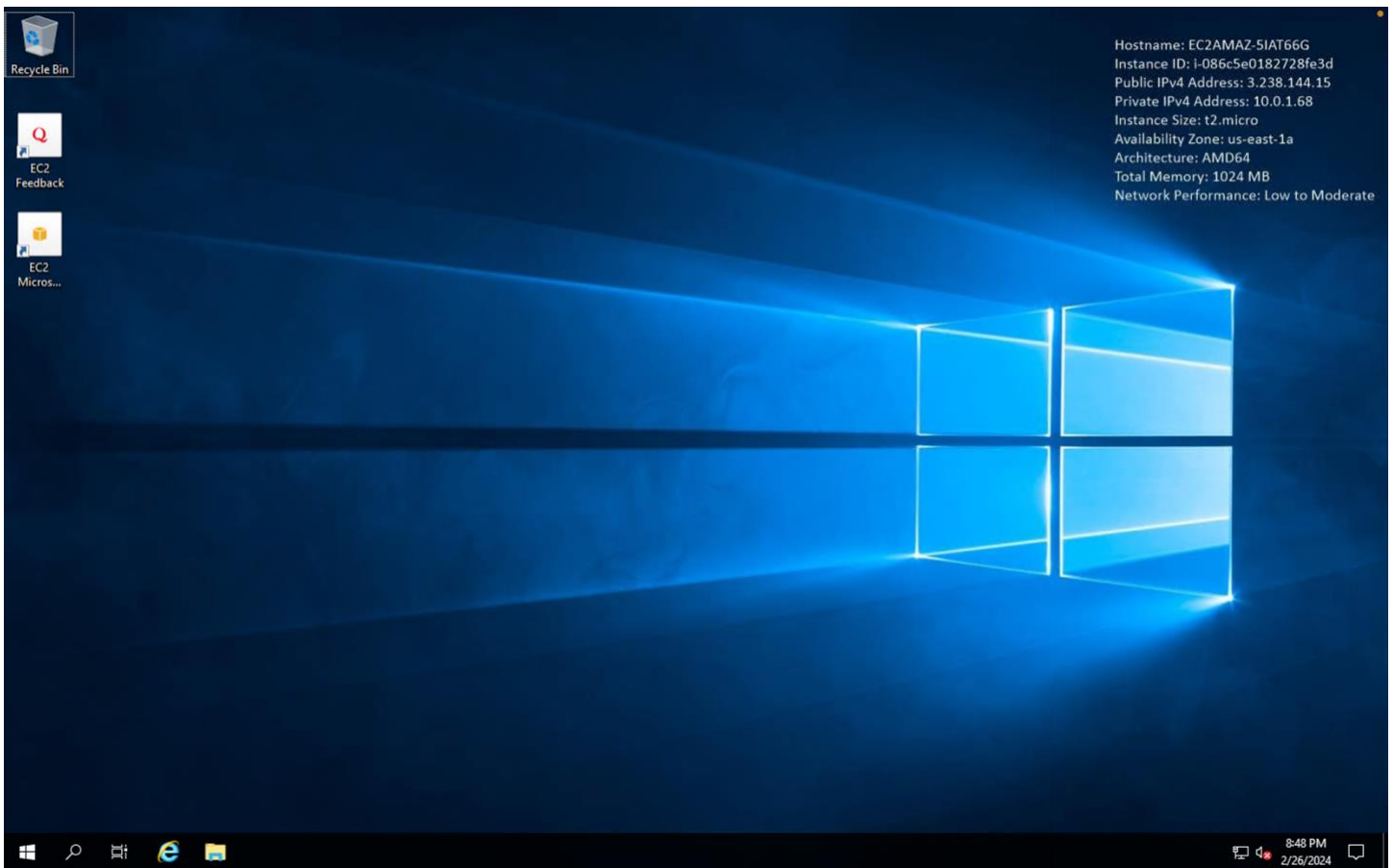
4.2- make sure you peer launch a new EC2 instance using the shared AMI(from my Peer)

← → ↻ ⚠ Not secure 35.174.115.26

webpage built by Bonaventou Lontum

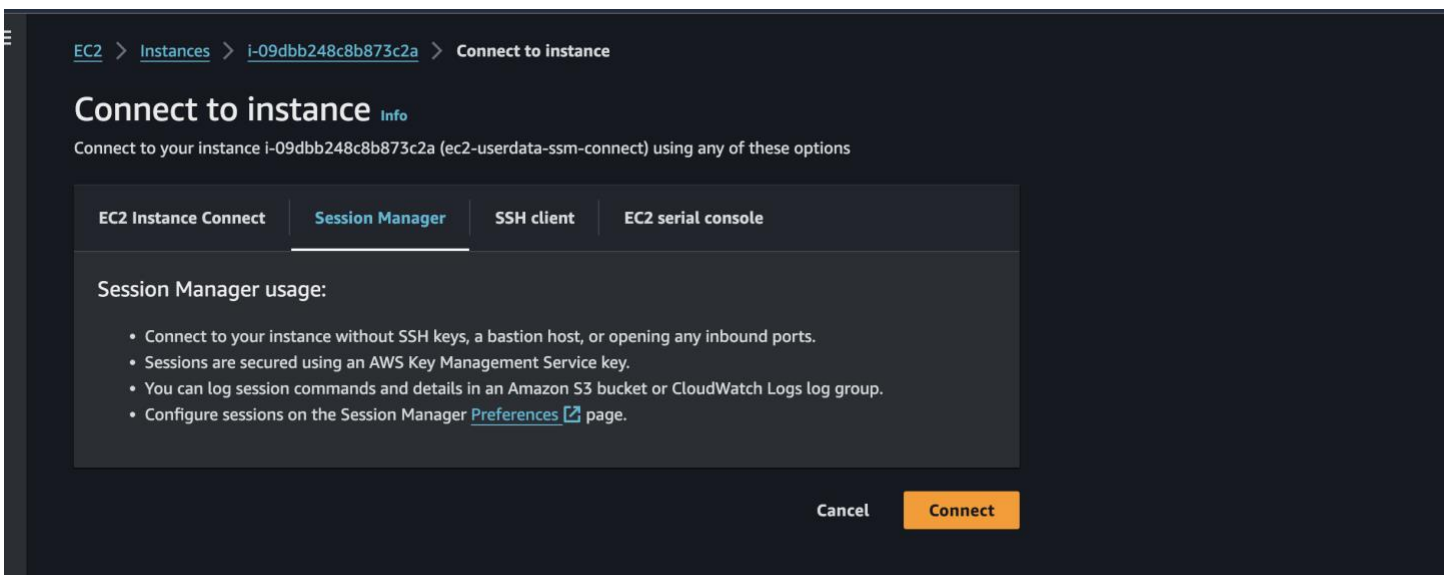
Project 5:

5.1- Posting a screenshot of the Windows Server landing page after successful authentication

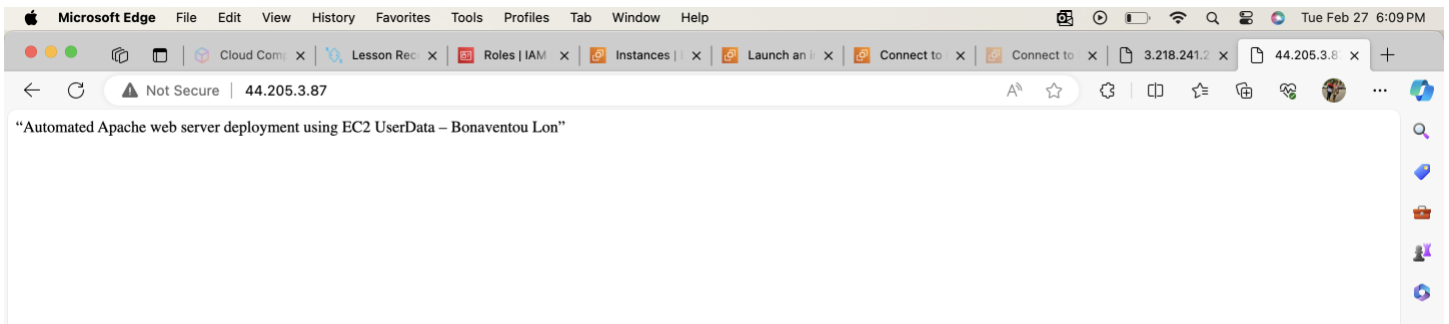


project 6: - User Data

6.1- Make sure to attach an SSM role at launch that will allow you to login into the instance within your browser



- **6.1-** Take screenshots, replace **Student name** by your name



project 7: AWS CLI

7.1- Posting a screenshot of the CLI commands for launching EC2 instance. Attach your

```
{
  "Key": "Name",
  "Value": "my-ec2-created-through-CLI"
},
"VirtualizationType": "hvm",
"CpuOptions": {
  "CoreCount": 1,
  "ThreadsPerCore": 1
},
"CapacityReservationSpecification": {
  "CapacityReservationPreference": "open"
},
"MetadataOptions": {
  "State": "pending",
  "HttpTokens": "required",
  "HttpPutResponseHopLimit": 2,
  "HttpEndpoint": "enabled",
  "HttpProtocolIpv6": "disabled",
  "InstanceMetadataTags": "disabled"
},
"EnclaveOptions": {
  "Enabled": false
},
"BootMode": "uefi-preferred",
"PrivateDnsNameOptions": {
  "HostnameType": "ip-name",
  "EnableResourceNameDnsARecord": false,
  "EnableResourceNameDnsAAAARecord": false
},
"MaintenanceOptions": {
  "AutoRecovery": "default"
},
"CurrentInstanceBootMode": "legacy-bios"
},
"OwnerId": "975049985507",
"ReservationId": "r-04215573c001fcd86"
}
users-MBP:~ user$ █
```

7.2- Posting a screenshot of the CLI commands for terminating the EC2 instance.

```
    },
    "EnclaveOptions": {
      "Enabled": false
    },
  },
  "TerminatingInstances": [
    {
      "CurrentState": {
        "Code": 48,
        "Name": "terminated"
      },
      "InstanceId": "i-08ff0d5709d9b5012",
      "PreviousState": {
        "Code": 48,
        "Name": "terminated"
      }
    }
  ]
}
users-MBP:~ user$ aws ec2 terminate-instances --instance-ids i-08ff0d5709d9b5012 --region us-east-1
users-MBP:~ user$
```

Project 8: EBS & SNAPSHOT

8.2- Taking a snapshot of the Root Volume

Instances (1/1) Info

ConnectInstance stateActionsLaunch instances

Find Instance by attribute or tag (case-sensitive)Any state

Name	Instance ID	Instance state	Instanc...	Status check	Alarm status	Availab
my-ec2-created-through-CLI	i-07ce2dc0970e54954	Running	t2.micro	2/2 checks passed	View alarms	us-east-

Instance: i-07ce2dc0970e54954 (my-ec2-created-through-CLI)

Root device details

Root device name

/dev/xvda

Root device type

EBS

EBS optimization

disabled

Block devices

Filter block devices

Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time	Encrypted	KMS key ID
vol-0e2f81ef7b39f852b	/dev/xvda	8	Attached	2024/03/04 09:54 GMT-5	No	-

Recent root volume replacement tasks

Filter tasks

Replace root volume

Task ID	Task state	Start time	Completion time	Tags
---------	------------	------------	-----------------	------

© 2024, Amazon Web Services, Inc. or its affiliates.

Privacy

Terms

Cookie preferences

8.3- Creating a new Volume (tag “**Bonaventou**”, size 50 GB) in the same Availability Zone (AZ) as the EC2 instance.

Search

< 1 >

⚙️

🔍

<input type="checkbox"/>	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created
<input type="checkbox"/>	-	vol-0e2f81ef7b39f852b	gp3	8 GiB	3000	125	snap-0fc9d6b...	2024/03/04 09:54
<input checked="" type="checkbox"/>	Bonaventou	vol-0e1a7160d5d831c0f	gp3	50 GiB	3000	125	-	2024/03/04 08:54

Volume ID: vol-0e1a7160d5d831c0f (Bonaventou)

⚙️

✕

Details

Status checks

Monitoring

Tags

Volume ID

vol-0e1a7160d5d831c0f (Bonaventou)

AWS Compute Optimizer finding

Opt-In to AWS Compute Optimizer for recommendations. | [Learn more](#)

Encryption

Not encrypted

Fast snapshot restored

No

Multi-Attach enabled

No

Size

50 GiB

Volume state

In-use

KMS key ID

-

Snapshot

-

Attached resources

[i-07ce2dc0970e54954 \(my-ec2-created-through-CLI\)](#): /dev/sdf (attached)

Type

gp3

IOPS

3000

KMS key alias

-

Availability Zone

us-east-1b

Outposts ARN

-

Volume status

Okay

Throughput

125

KMS key ARN

-

Created

Mon Mar 04 2024 08:54:22 GMT-0500 (Eastern Standard Time)

8.4- Attach the new volume to the EC2 created in step 1. Take a screenshot showing both Volumes in the console

Find Instance by attribute or tag (case-sensitive)

Any state

< 1 >

⚙️

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instanc...	Status check	Alarm status	Availab
<input checked="" type="checkbox"/>	my-ec2-created-through-CLI	i-07ce2dc0970e54954	Running	t2.micro	2/2 checks passed	View alarms +	us-east-

Instance: i-07ce2dc0970e54954 (my-ec2-created-through-CLI)

⚙️

✕

Root device name

/dev/xvda

Root device type

EBS

EBS optimization

disabled

Block devices

Filter block devices

Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time	Encrypted	KMS key ID
vol-0e2f81ef7b39f852b	/dev/xvda	8	Attached	2024/03/04 09:54 GMT-5	No	-
vol-0e1a7160d5d831c0f	/dev/sdf	50	Attached	2024/03/04 12:32 GMT-5	No	-

Recent root volume replacement tasks

8.5- login to the EC2 instance and run the command “lsblk”. Take a screenshot showing both Volumes size

```
users-MacBook-Pro:Downloads user$
users-MacBook-Pro:Downloads user$ chmod 400 "awesome-key-east1.pem"
users-MacBook-Pro:Downloads user$ ec2-54-89-229-1.compute-1.amazonaws.com
-sh: ec2-54-89-229-1.compute-1.amazonaws.com: command not found
users-MacBook-Pro:Downloads user$ ssh -i "awesome-key-east1.pem" ec2-user@ec2-54-89-229-1.compute-1.amazonaws.com
The authenticity of host 'ec2-54-89-229-1.compute-1.amazonaws.com (54.89.229.1)' can't be established.
ED25519 key fingerprint is SHA256:8RGs5c1/2uVub7q8iSLIkrbCLkoR8s1p7ct9bgAwv8c.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-54-89-229-1.compute-1.amazonaws.com' (ED25519) to the list of known hosts.

,      #_
~\    ####_   Amazon Linux 2023
~~   \#####\
~~       \###|
~~          \|/ ____ https://aws.amazon.com/linux/amazon-linux-2023
~~           V~' '->
~~~~
~~~~_. _/_/_/
~~~~_/_/_/_/_/
~~~~_/_/_/_/_/m/'

[ec2-user@ip-10-0-2-140 ~]$ lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
xvda         202:0    0   8G  0 disk
├─xvda1       202:1    0   8G  0 part /
├─xvda127     259:0    0   1M  0 part
└─xvda128     259:1    0  10M  0 part /boot/efi
xvdf         202:80    0  50G  0 disk

[ec2-user@ip-10-0-2-140 ~]$
```